

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal with street lighting and interconnect at the intersection of MD 198 and Old Columbia Pike in Montgomery County. A fourth leg of the intersection is being constructed to serve as a driveway to Burtonsville Elementary School. The existing traffic signal at MD 198 and Burtonsville V.F.D. shall be removed as part of this project. MD 198 is assumed to run in an east / west direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 198 approaches running concurrently. Video detection shall be used for all left turn approaches. Exclusive/Permissive left turn phases shall be provided for both approaches of MD 198. A pedestrian phase with pushbutton actuation shall be provided across the west leg of MD 198. The pedestrian phases across Old Columbia Pike and the School Driveway shall be on recall. The Old Columbia Pike and Burtonsville Elementary School approaches shall run concurrently.

2. A full-traffic-actuated, eight-phase controller, L.A.U. and L.A.U. Panel with associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.

2. The contractor shall run the interconnect cable into the base of the cabinet and properly tag the cable. Contact Mr. Bobby Gonzales of MCDPW&T at (240) 777-8761 seventy-two hours in advance of intended work.

3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9000	Eight-phase, full-traffic actuated, solid state digital controller, L.A.U., L.A.U. Panel and associated harnesses housed in a NEMA size "6" base-mounted cabinet.	1 EA
9089	Sheet aluminum signs to consist of:	116 SF
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42") mast arm mounted.	2 EA
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mounted.	2 EA
	GUIDE SHIELD ASSEMBLY (36"x68") pole mounted. M3-2 "WEST" (30"x15") M1-5 "MD 198" (36"x30") M6-1 "left arrow" (36"x24")	1 EA
	GUIDE SHIELD ASSEMBLY (24"x51") pole mounted. M3-2 "EAST" (24"x12") M1-5 "MD 198" (30"x24") M6-1 "right arrow" (21"x15")	1 EA
	S2-1 "SCHOOL CROSSING" ground mounted. (30"x30")	4 EA
	M6-2 "right arrow" ground mounted (21"x15")	2 EA
	M6-2 "left arrow" ground mounted (21"x15")	2 EA
	M3-3 NEW "SIGNAL AHEAD" sign, (36" x 36") ground mounted with hardware.	2 EA
	Pedestrian education signs (No road name)	2 EA
9090	Sheet aluminum signs to consist of: (Blue or Green)	42 SF
	D3-2 "Old Columbia PK 15400> right arrow" dual faced sign (variable x 16") mast arm mounted.	1 EA
	D3-2 "<15400 Old Columbia PK " left arrow" dual faced sign	1 EA
	D3-2 "Spencerville RD <3600" dual faced sign (variable x 16") mast arm mounted.	1 EA
	D3-2 "Spencerville RD 3600>" dual faced sign (variable x 16") mast arm mounted.	1 EA
9096	Pedestrian pushbutton and R10-3C sign. (Note: Sign to read "PUSHBUTTON TO CROSS SPENCERVILLE RD".)	2 EA

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2001	Test pit excavation.	5 C.Y.

EQUIPMENT LISTS (CONT.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
8001	Furnish and install concrete for signal foundation.	17 C.Y.
8018	Install pushbutton and sign.	2 EA
8019	Install controller and cabinet pole mount. (Splice cabinet)	1 EA
8020	Install controller and cabinet base mount.	1 EA
8024	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched	40 L.F.
8027	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	300 L.F.
8029	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - bored.	230 L.F.
8030	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched.	35 L.F.
8033	Furnish and install electrical handhole.	4 EA
8034	Furnish and install ground rod -#4" x 10'.	5 EA
8039	Furnish and install 12-pair communication cable, jelly-filled, (underground).	650 L.F.
8042	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	190 L.F.
8043	Furnish and install electrical cable - 3 conductor (No. 14 AWG).	465 L.F.
8044	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	580 L.F.
8045	Furnish and install electrical cable - 7 conductor (No. 14 AWG).	1320 L.F.
8046	Furnish and install tray cable - 2 conductor (No. 12 AWG).	320 L.F.
8048	Furnish and install No. 6 AWG stranded bare copper ground wire.	90 L.F.
8051	Furnish and install wood sign supports 4" x 6".	68 L.F.
8052	Install ground mounted sign.	52 S.F.
8053	Install overhead sign.	106 S.F.
8055	Furnish and install 250 watt HPS Luminaire with photocell.	2 EA
8056	Furnish and install 15' lighting bracket arm for traffic signal structure.	2 EA
8057	Remove and dispose of existing foundation 12" below grade.	5 EA
8058	Removal of existing controller, cabinet and galvanized signal structure.	1 EA
8059	Delivery of removed controller, cabinet and galvanized signal structure (per intersection).	1 EA
8060	Remove and dispose of existing material and equipment per assignment.	1 EA
8064	Furnish and install 2" electrical conduit - polyvinyl chloride riser.	30 L.F.
8066	Furnish and install control and distribution equipment (120/240 V, 1 phase 3 wire system).	1 EA
8076	Furnish and install mast arm pole and 38' mast arm.	1 EA
8077	Furnish and install mast arm pole and 50' mast arm.	2 EA
8078	Furnish and install mast arm pole and 60' mast arm.	1 EA
8084	Furnish and install 12" vehicular traffic signal head section	41 EA
NEG.	Pull back and cut 12-pair interconnect cable	150 L.F.

EQUIPMENT LISTS (CONT.)

C. EQUIPMENT TO BE FURNISHED BY MONTGOMERY COUNTY

ITEM NO.	DESCRIPTION	QUANTITY
	Splice cabinet	1 EA

D. EQUIPMENT TO BE FURNISHED AND INSTALLED BY MONTGOMERY COUNTY

ITEM NO.	DESCRIPTION	QUANTITY
	Video detector camera w/ coaxial cable	4 EA
	Furnish and install electrical cable - 3 conductor (No. 14 AWG).	825 L.F.

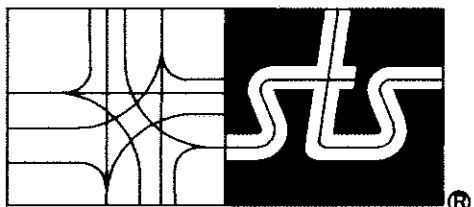
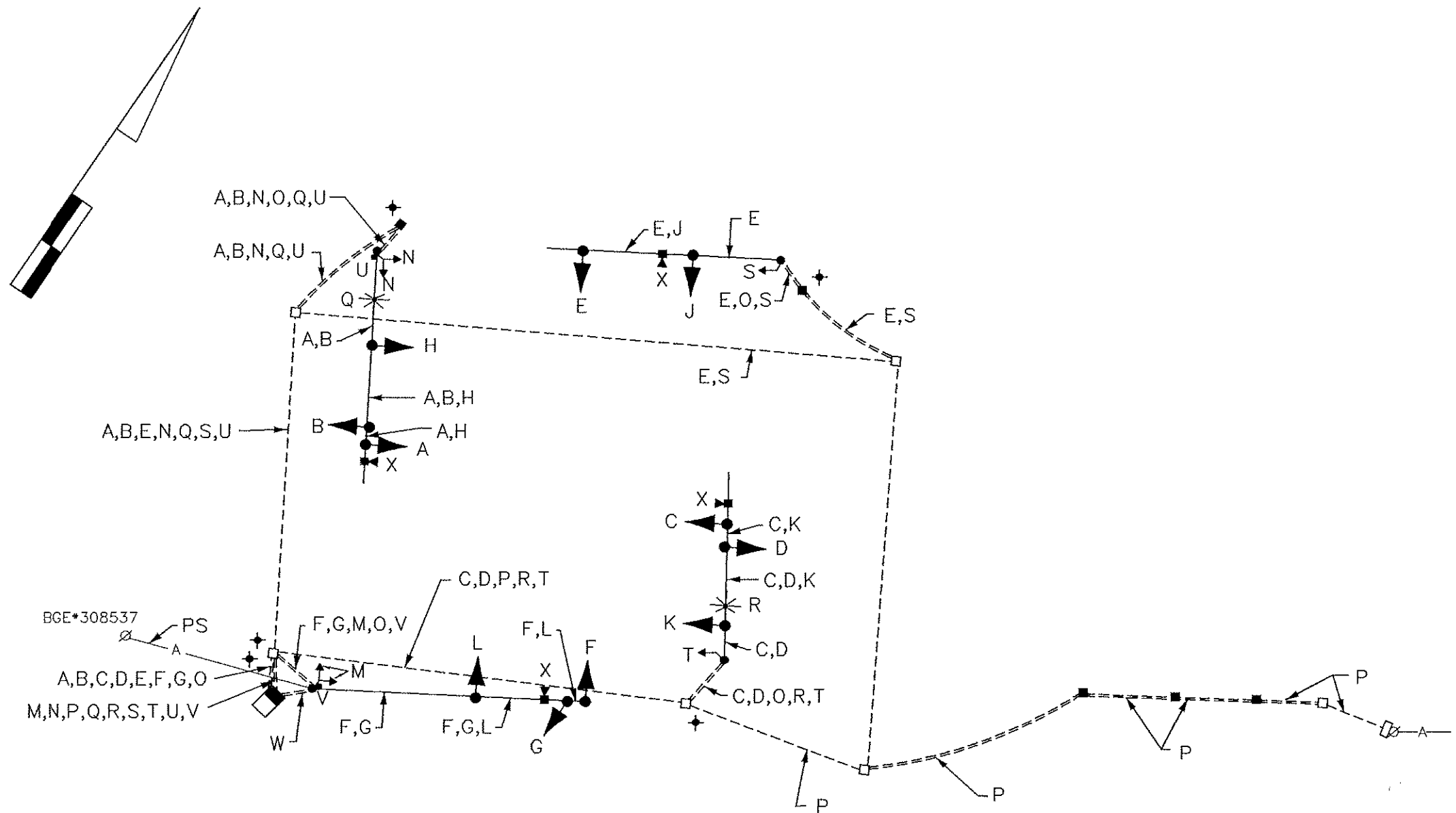
PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)
PHASE 1 & 5	←G-/R	←G-/R	R	←G-/R	←G-/R	R	R	R	R	R	R
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6											
PHASE 1 & 6	←G-/G	←G-/G	G	R	R	R	R	R	R	R	R
1 & 6 CHANGE	←Y-/G	←Y-/G	G	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	←G-/G	←G-/G	G	R	R	R	R	R
2 & 5 CHANGE	R	R	R	←Y-/G	←Y-/G	G	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM

WIRING KEY

- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- O - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- P - 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
- Q - 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
- S - 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- U - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- W - 3-1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- X - VIDEO DETECTOR (Note: Detector and associated wiring shall be installed by Montgomery County Forces.)
- PS - PROPOSED OVERHEAD SERVICE TO BE INSTALLED BY BGE
- ★ - GROUND ROD



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TASK42GLDGN

REVISIONS

APPROVALS

ASST. CHIEF TEDD SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY



MD 198 (SPENCERVILLE RD) AND
OLD COLUMBIA PIKE / SCHOOL DRIVEWAY

DRAWN BY: ROB CICCHINI
CHECK BY: R ZACHERL
DATE: 5/24/2000
SCALE: N/A

COUNTY: MONTGOMERY
LOG MILE:
F.A.P. NO.
S.H.A. NO. ~~MD057A55/BS~~

TS NO.
4008
T.I.M.S. NO.
D 918

SHEET NO.
3 OF 3